Operational Community Health: Population Health for Small Warships

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- Research Ethics Statement
  - I declare no conflicts of interest or financial interests in any product or service mentioned in this article, including grants, employment, stock holdings, gifts, or honoraria.
  - All study results and data in this presentation met required research subject protection regulations.

Population Health Research Questions

- What are the most common chronic disease conditions affecting sailors?
- Who is affected?
- Could a ship have a disease burden that interferes with its mission?
- Does ship type and mission impact access to care?
- Why should a CO be concerned about a 20 year disease disability for a 36 month crewmember?

Population Health Process Elements

Research Designs

1. Identify the Population
- Data Integrity
- Prevalence

2. Forecast Demand
- Incidence

3. Manage Demand
- Disease Burden
- Mission Impact

6. Community Outreach
- Fleet DM Interventions

MHS

7. Analyze Performance & Health Status

Optimize Clinical System
- 4. Manage Capacity
- 5. Evidence-Based Primary, Secondary, & Tertiary Prevention

DoD (2001) Population Health Improvement Plan and Guide

Research Designs

- Data Integrity Studies
  - SAMS/CHCS Congruence (Westphal, 2005)
- Prevalence and Incidence Studies
  - Describing Chronic Disease Conditions in the Crews of Small Warships (Goodman, 2006)
- Disease Burden Studies
- Intervention Studies

SAMS/CHCS Congruence Study

Data Integrity Study

- Ships have unique DMSS codes and non-MTF PCM's
- Inconsistent Disease Nomenclature
- Can we use CHCS for clinical follow-up and prevalence research?
- What is the percent congruence between CHCS and SAMS to identify the right sailor on the right ship?

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SAMS/CHCS Results

Data associated with
3 DDG/CG ships

SAMS Roster	CHCS Roster: Yes (n=861)	CHCS Roster: No
Yes	25.8%	31.6%
No (N=639)	42.6%	??

Ship UIC to Non-

Crewmember Missed by CHCS

Chronic Diseases on Small Warships Study

- Describe the disease prevalence of asthma, cervical dysplasia, depression, diabetes mellitus, hyperlipidemia, and hypertension
- Multistage Cluster Sample (n=1300)
  - 10 Randomly Selected Ships (SAMS Roster)
  - 130 Randomly Selected Medical Records
- Clinical Data will be collected from CHCS and individual medical records

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Chronic Diseases on Small Warships Study

What do we hope to find?

- Prevalence rates for six chronic diseases
- Distribution of co-morbid chronic diseases
- Characteristics of sailors who have chronic diseases
- Begin to formulate a disease burden index for future studies and fleet readiness decisions

Evidence Based Decisions

Why should we do this?

- Fitness for duty versus Fitness for Sea-Duty Determinations
- Medical policies that affect retention and career impact
- Fleet policies that affect access to treatment and long-term medications

Improving Population Health

Population Health Research is an essential component to developing sound interventions including:

- Health care services that are mission focused for fleet commands
- Focused Disease Management strategies that maximize combat readiness of sailors and ships
- Accelerated specialty appointments for fleet sailors with co-morbid conditions

Questions & Comments

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